Amendment to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (currently amended) A method for allocating a communication channel configuration in an ad-hoc network using spread spectrum modulation, comprising:

collecting existing and proposed transmission information between nodes in said network;

estimating a respective interference factor set for each existing transmission between certain of said nodes in relation to at least one proposed transmission by a transmitting node,

wherein each said respective interference factor set includes a first estimated interference value representing an estimated interference that a respective said existing transmission imposes on said proposed transmission and a second estimated interference value representing an estimated interference that said proposed transmission imposes on said respective existing transmission;

calculating a minimum interference factor set based on said estimated respective interference factor sets; and

assigning said communication channel configuration to said transmitting node for said proposed transmission to another of said nodes based on said calculated minimum interference factor set.

2. (original) A method as claimed in claim 1, wherein:

said assigned communication channel configuration includes a frequency channel and a code channel.

3. (original) A method as claimed in claim 1, wherein:

said estimating estimates said respective interference factor sets based on information including respective distances and path loss between said certain nodes.

4. (cancelled)

5. (currently amended) A method as claimed in claim 1 ~~[4]~~, wherein said calculating includes:

mathematically combining said first and second estimated interference values in each said respective interference factor set with coefficients associated with available transmission frequency channels and code channels to produce adjusted interference factor sets, each including adjusted first and second estimated interference values;

mathematically combining said adjusted first and second estimated interference values of said adjusted interference factor sets to produce result interference factor sets; and

selecting one of said result interference factor sets having the lowest values of all of said result interference factor sets as said minimum interference factor set.

6. (currently amended) A method ~~as claimed in claim 1, wherein:~~ for allocating a communication channel configuration in an ad-hoc network using spread spectrum modulation, comprising:

collecting existing and proposed transmission information between nodes in said network;

estimating a respective interference factor set for each existing transmission between certain of said nodes in relation to at least one proposed transmission by a transmitting node, wherein said estimating estimates a respective interference factor set for each existing transmission between certain of said nodes in relation to each respective proposed transmission by said transmitting node;

calculating a minimum interference factor set based on said estimated respective interference factor sets, wherein said calculating calculates a respective said minimum interference factor set based on each respective said estimated respective interference factor sets; and

assigning said communication channel configuration to said transmitting node for said proposed transmission to another of said nodes based on said calculated minimum interference factor set, wherein said assigning assigns a respective said communication channel configuration to said transmitting node for each said respective proposed transmission to another of said nodes based on said respective calculated minimum interference factor sets.

7. (currently amended) A system for allocating a communication channel configuration to a transmitting node in an ad-hoc network using spread spectrum modulation, the system comprising:

a memory, adapted to collect existing and proposed transmission information between nodes in said network; and

a controller, adapted to estimate a respective interference factor set for each existing transmission between certain of said nodes in relation to at least one proposed transmission by said transmitting node, to calculate a minimum interference factor set based on said estimated respective interference factor sets, and to assign said communication channel configuration to said transmitting node for said proposed transmission to another of said nodes based on said calculated minimum interference factor set,

wherein each said respective interference factor set includes a first estimated interference value representing an estimated interference that a respective said existing transmission imposes on said proposed transmission and a second estimated interference value representing an estimated interference that said proposed transmission imposes on said respective existing transmission.

8. (original) A system as claimed in claim 7, wherein:

said assigned communication channel configuration includes a frequency channel and a code channel.

9. (original) A system as claimed in claim 7, wherein:

said controller is adapted to estimate said respective interference factor sets based on information including respective distances and path loss between said certain nodes.

10. (cancelled)

11. (currently amended) A system as claimed in claim 7 ~~10~~, wherein said controller is adapted to calculate said minimum interference factor set by performing the following operations:

mathematically combining said first and second estimated interference values in each said respective interference factor set with coefficients associated with available transmission frequency channels and code channels to produce adjusted interference factor sets, each including adjusted first and second estimated interference values;

mathematically combining said adjusted first and second estimated interference values of said adjusted interference factor sets to produce result interference factor sets; and

selecting one of said result interference factor sets having the lowest values of all of said result interference factor sets as said minimum interference factor set.

12. (original) A system as claimed in claim 7, wherein:

said controller is adapted to estimate a respective interference factor set for each existing transmission between certain of said nodes in relation to each respective proposed transmission by said transmitting node, calculate a respective said minimum interference factor set based on each respective said estimated respective interference factor sets, and assign a respective said communication channel configuration to said transmitting node for each said respective proposed transmission to another of said nodes based on said respective calculated minimum interference factor sets.

13. (currently amended) A computer readable medium of instructions, adapted to control an ad-hoc network using spread spectrum modulation to allocate a communication channel configuration to a transmitting node in said network, comprising:

a first set of instructions, adapted to control a processor to collect existing and proposed transmission information between nodes in said network;

a second set of instructions, adapted to control said processor to estimate a respective interference factor set for each existing transmission between certain of said nodes in relation to at least one proposed transmission by a transmitting node,

wherein each said respective interference factor set includes a first estimated interference value representing an estimated interference that a respective said existing transmission imposes on said proposed transmission and a second estimated interference value representing an estimated interference that said proposed transmission imposes on said respective existing transmission;

a third set of instructions, adapted to control said processor to calculate a minimum interference factor set based on said estimated respective interference factor sets; and

a fourth set of instructions, adapted to control said processor to assign said communication channel configuration to said transmitting node for said proposed transmission to another of said nodes based on said calculated minimum interference factor set.

14. (original) A computer readable medium of instructions as claimed in claim 13, wherein:

said assigned communication channel configuration includes a frequency channel and a code channel.

15. (original) A computer readable medium of instructions as claimed in claim 13, wherein:

said second set of instructions is adapted to control said processor to estimate said respective interference factor sets based on information including respective distances between said certain nodes.

16. (cancelled)

17. (currently amended) A computer readable medium of instructions as claimed in claim 13 ~~16~~, wherein said third set of instructions is adapted to control said processor to:

mathematically combine said first and second estimated interference values in each said respective interference factor set with coefficients associated with available transmission frequency channels and code channels to produce adjusted interference factor sets, each including adjusted first and second estimated interference values;

mathematically combine said adjusted first and second estimated interference values of said adjusted interference factor sets to produce result interference factor sets; and

select one of said result interference factor sets having the lowest values of all of said result interference factor sets as said minimum interference factor set.

18. (currently amended) A computer readable medium of instructions ~~as claimed in claim 13, wherein:~~ adapted to control an ad-hoc network using spread spectrum modulation to allocate a communication channel configuration to a transmitting node in said network, comprising:

a first set of instructions, adapted to control a processor to collect existing and proposed transmission information between nodes in said network;

a second set of instructions, adapted to control said processor to estimate a respective interference factor set for each existing transmission between certain of said nodes in relation to at least one proposed transmission by a transmitting node,

wherein said second set of instructions is adapted to control said processor to estimate a respective interference factor set for each existing transmission between certain of said nodes in relation to each respective proposed transmission by a transmitting node;

a third set of instructions, adapted to control said processor to calculate a minimum interference factor set based on said estimated respective interference factor sets,

wherein said third set of instructions is adapted to control said processor to calculate a respective said minimum interference factor set based on each respective said estimated respective interference factor sets; and

a fourth set of instructions, adapted to control said processor to assign said communication channel configuration to said transmitting node for said proposed transmission to another of said nodes based on said calculated minimum interference factor set,

wherein said fourth set of instructions is adapted to control said processor to assign a respective said communication channel configuration to said transmitting node for each said respective proposed transmission to another of said nodes based on said respective calculated minimum interference factor sets.